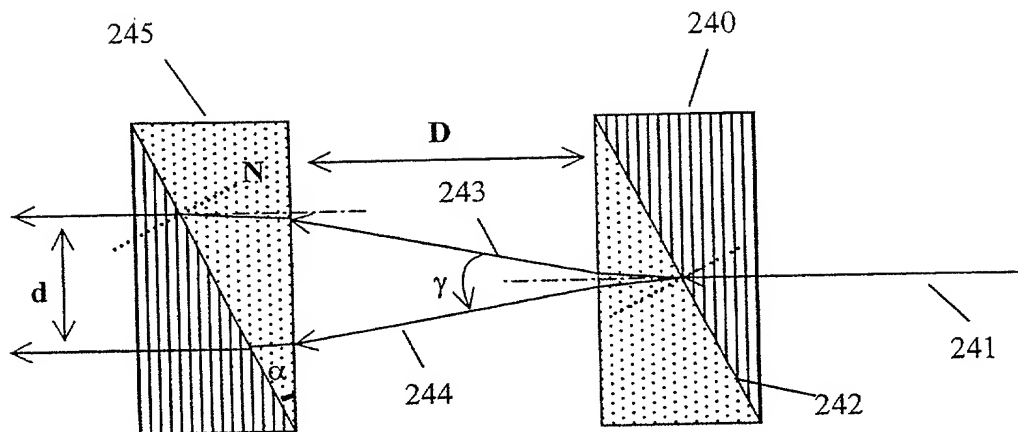


Fig. 1C

⊕	⊖	⊗	⊙	⊙	⊙	⊙	⊗	⊙	⊕
⊖	⊕	⊗	⊙	⊙	⊙	⊙	⊗	⊙	⊕
A	B	C	D	E	F	G	H	I	J
⊕	⊕	⊗	⊖	⊖	⊖	⊖	⊗	⊙	⊕
⊖	⊕	⊗	⊖	⊖	⊖	⊖	⊗	⊙	⊕

Fig. 1D



$$d \approx 2D \tan(\gamma/2) = 2D \tan\{\arcsin[(n_0 - n_e)\tan(\alpha)]\}$$

Example: $\alpha = 30^\circ$, $\Delta n = 0.2$, $D = 2\text{mm} \rightarrow d = 0.4\text{mm}$
 $4\text{mm} \rightarrow 0.8\text{mm}$

Fig. 2

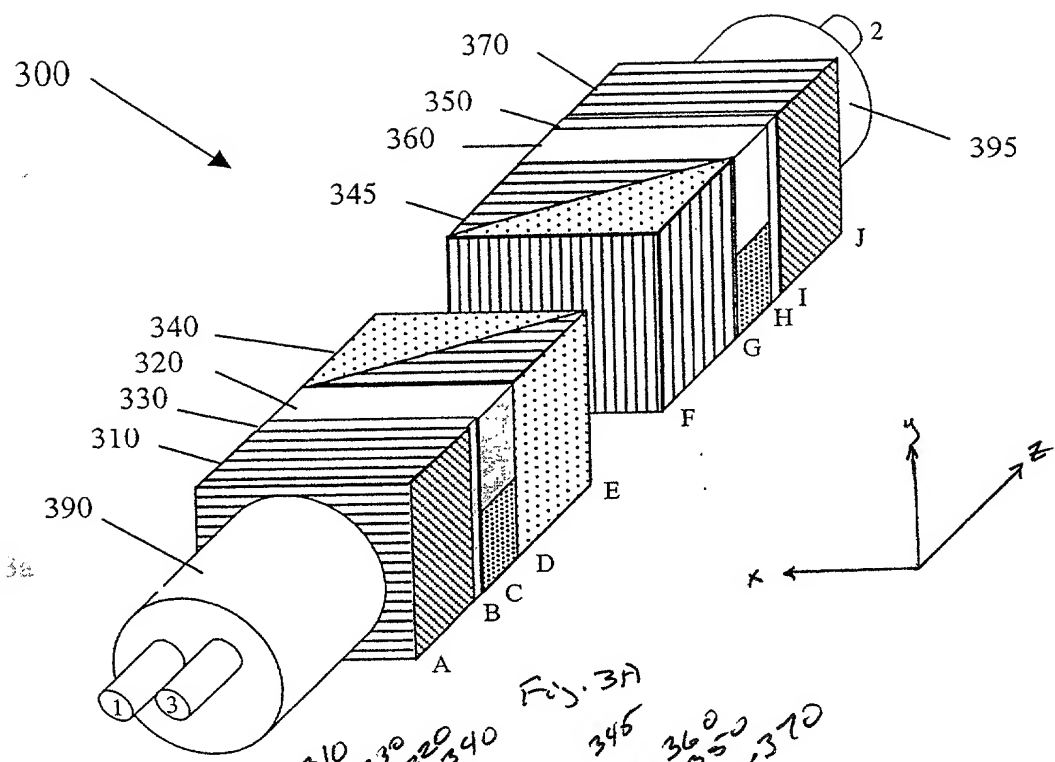


Figure 3a

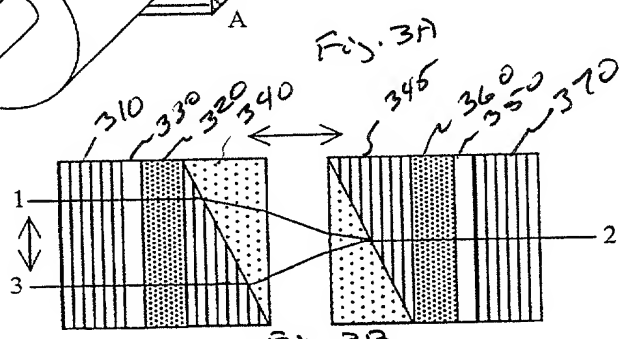


Figure 3b (top)

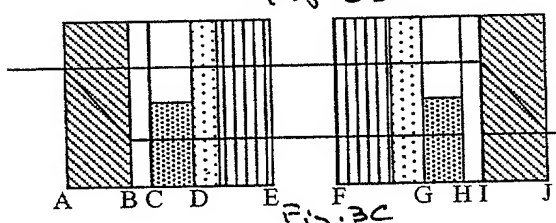


Figure 3c (side)

Fig. 3D

⊕	⊖	⊗	⊙	⊙	⊙	⊙	⊙	⊙	⊕
A	B	C	D	E	F	G	H	I	J
⊕	⊖	⊗	⊙	⊙	⊙	⊙	⊙	⊙	⊕

Fig. 3D

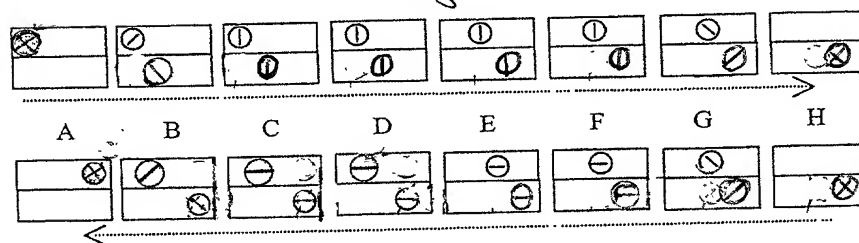
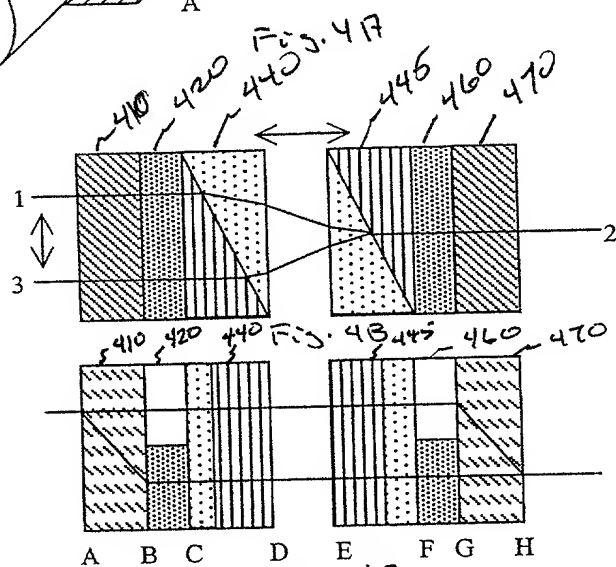
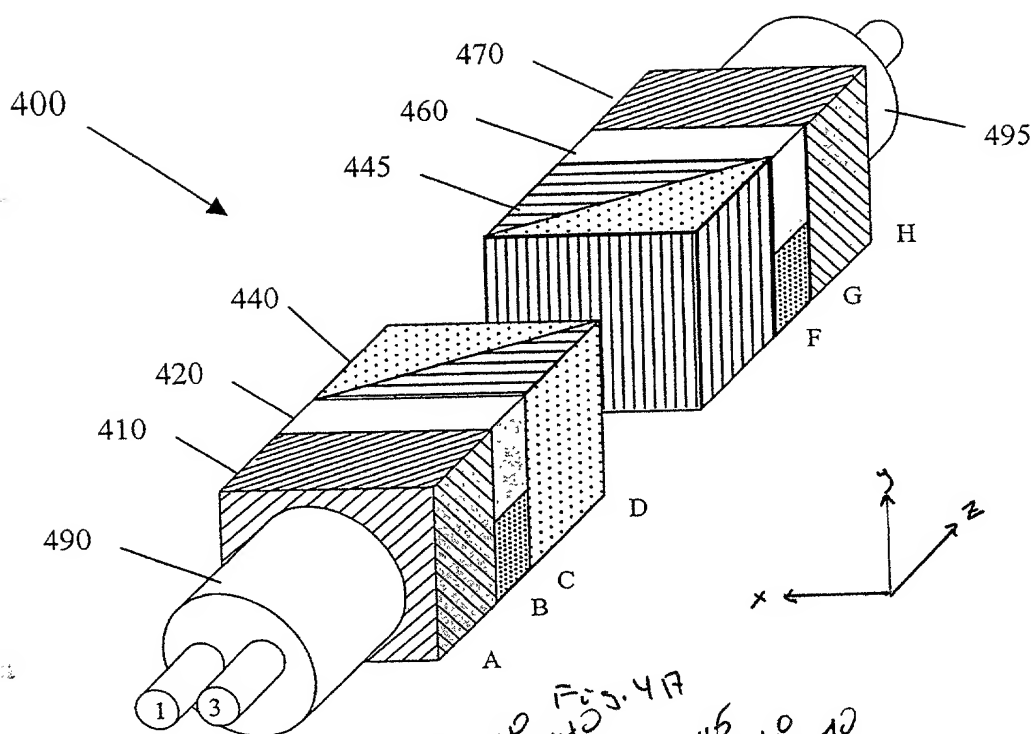


Fig. 4D

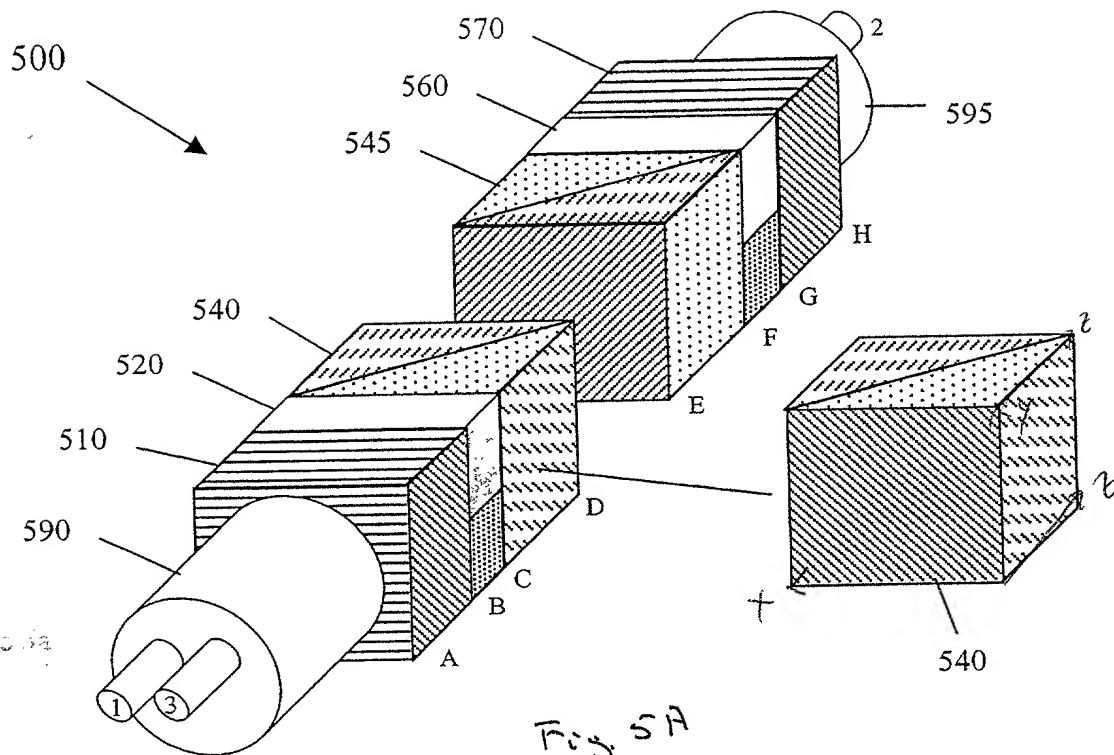


Figure 5a

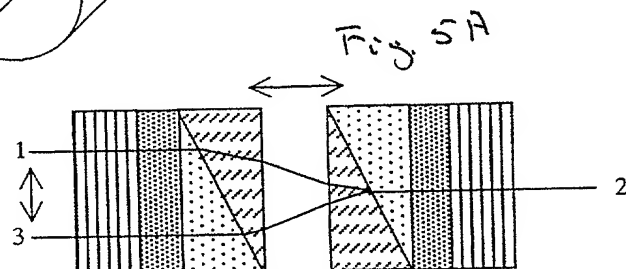


Figure 5b (top)

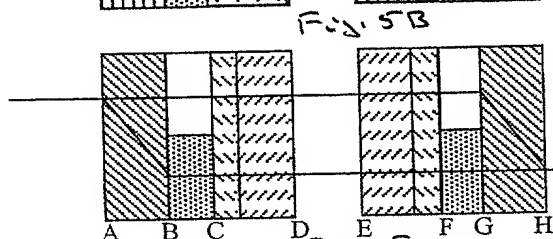


Figure 5b (bottom)

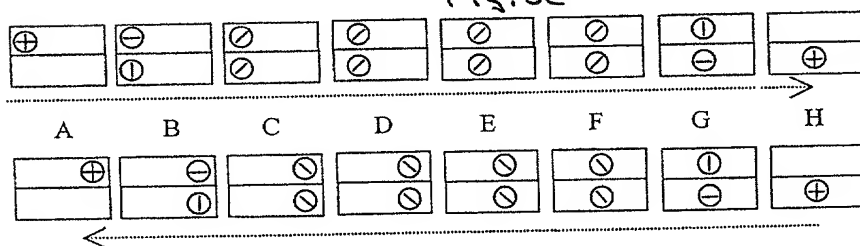


Fig. 5c

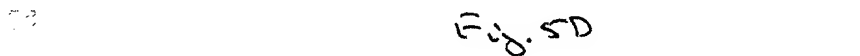


Fig. 5d

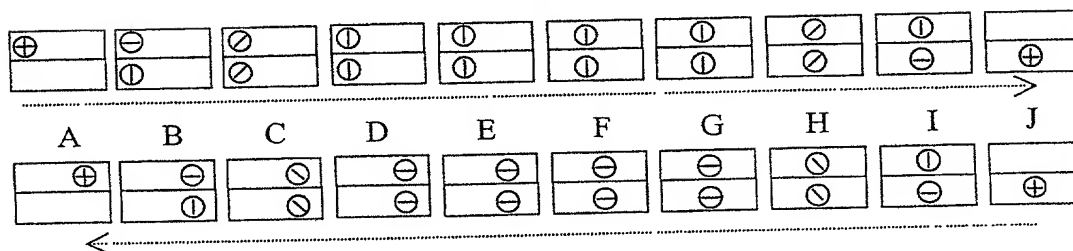
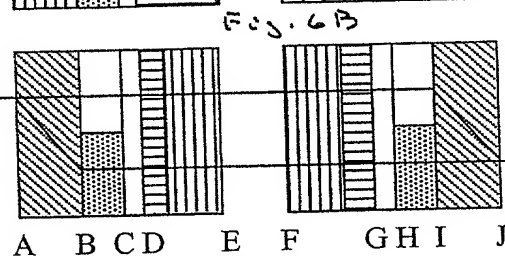
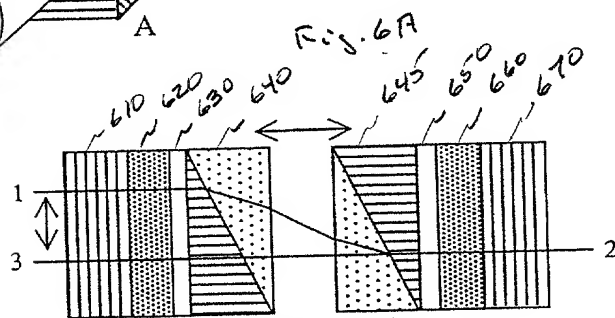
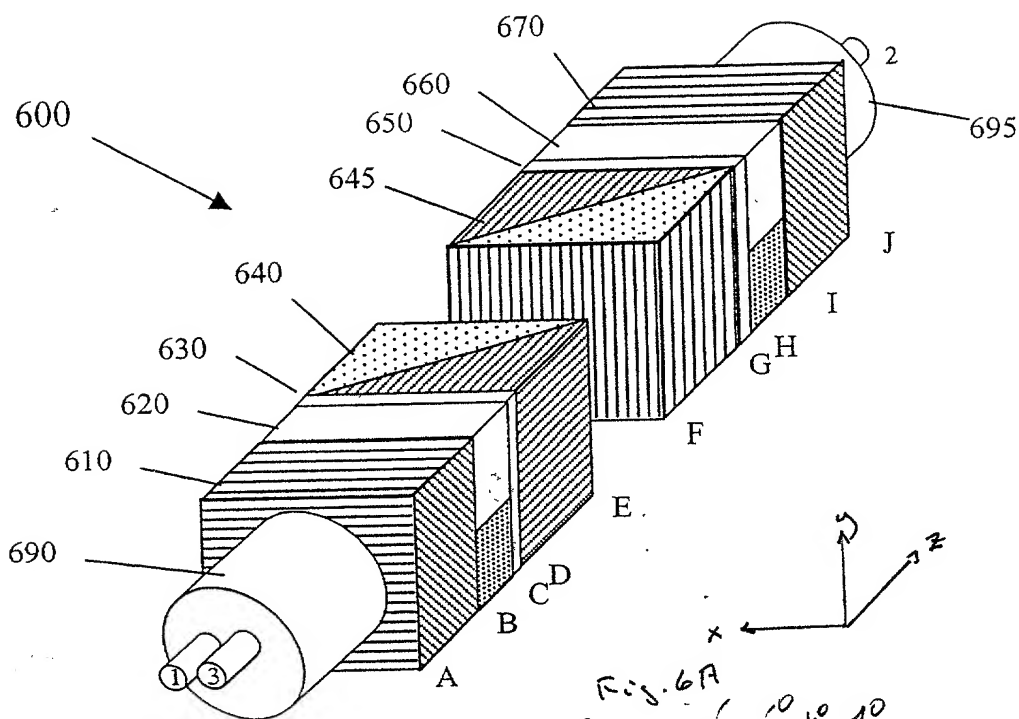
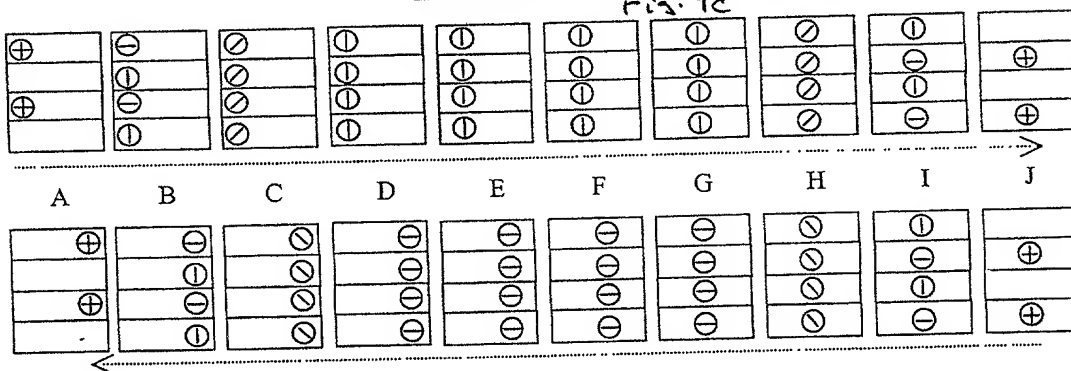
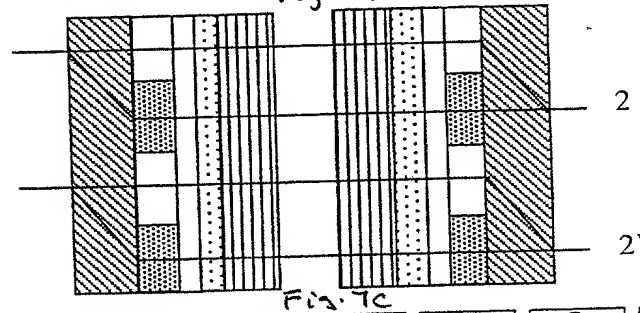
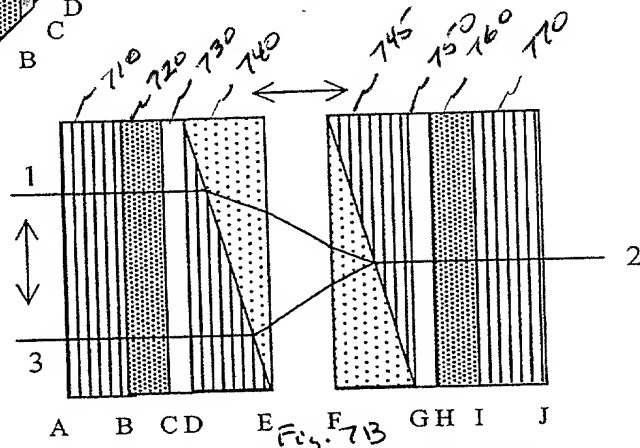
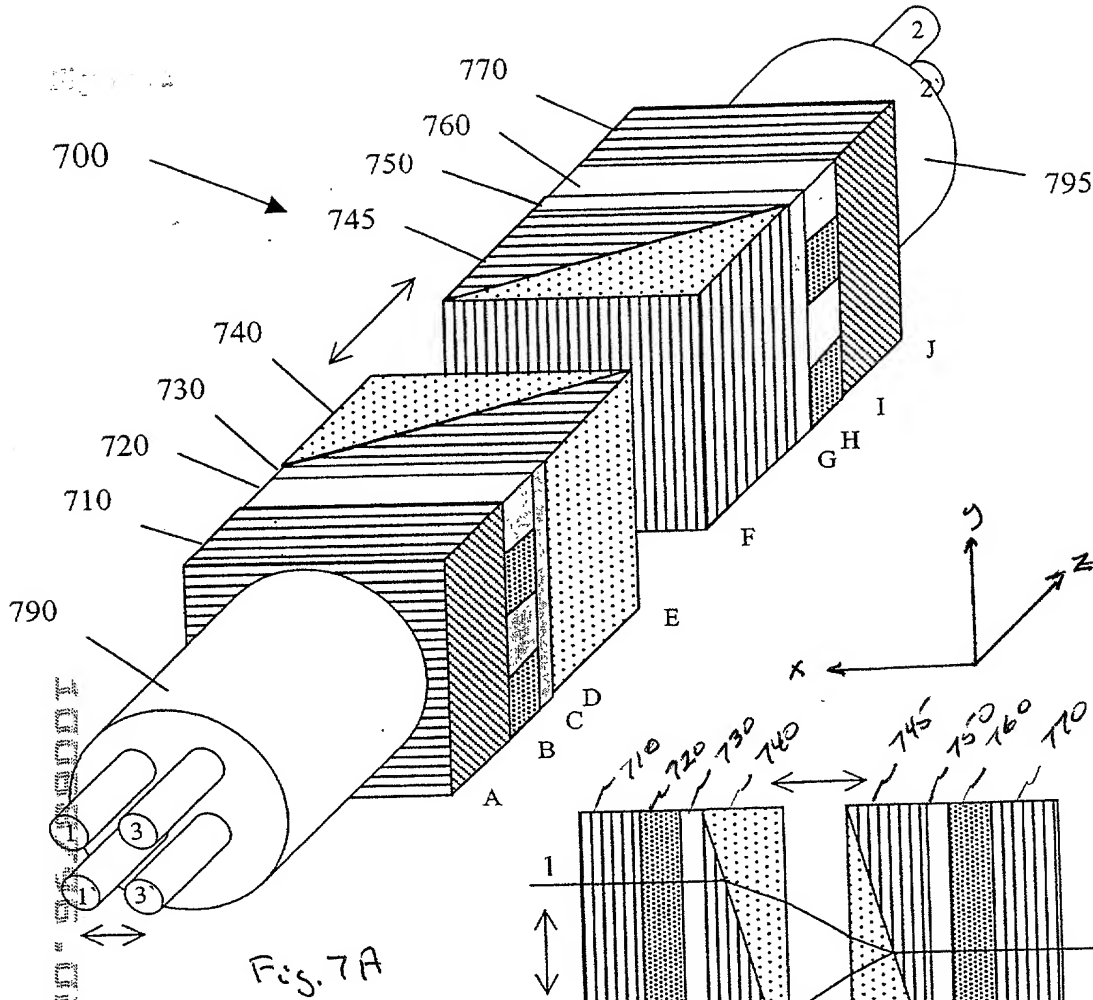


Fig. 6D



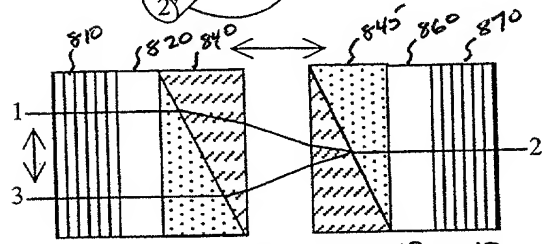
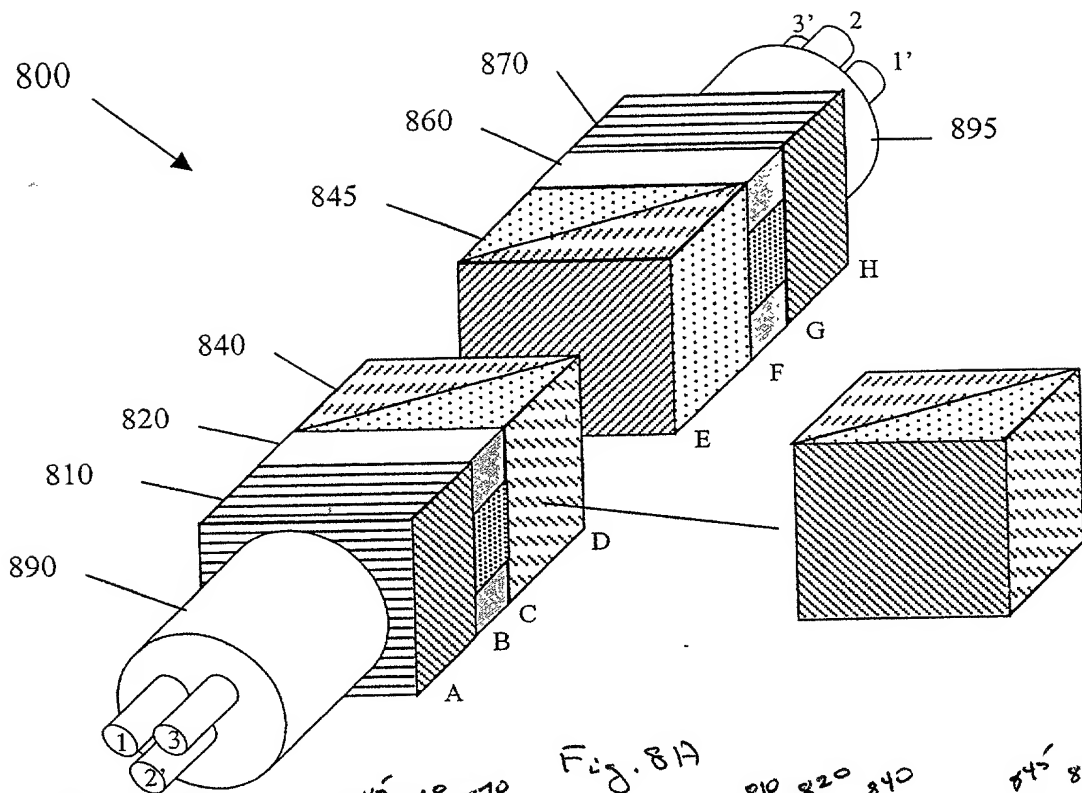


Fig. 8B (top)

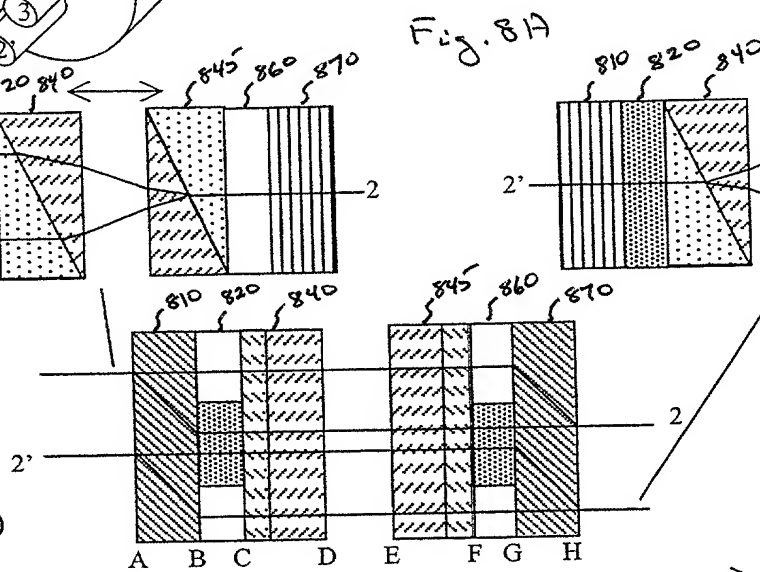


Fig. 8C (top)

Fig. 8D (side)

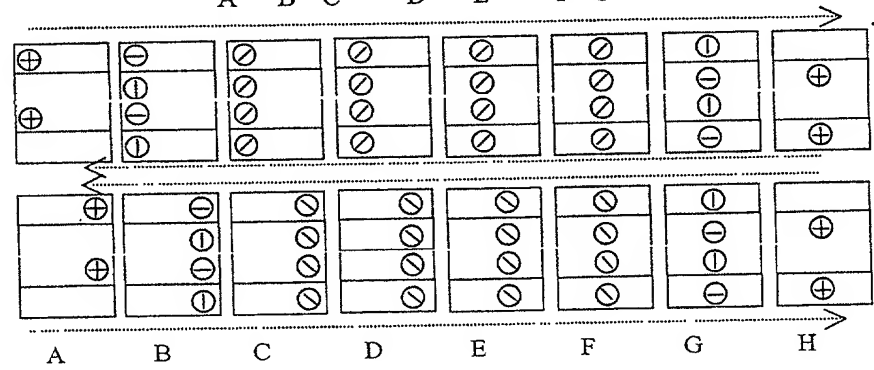


Fig. 8E

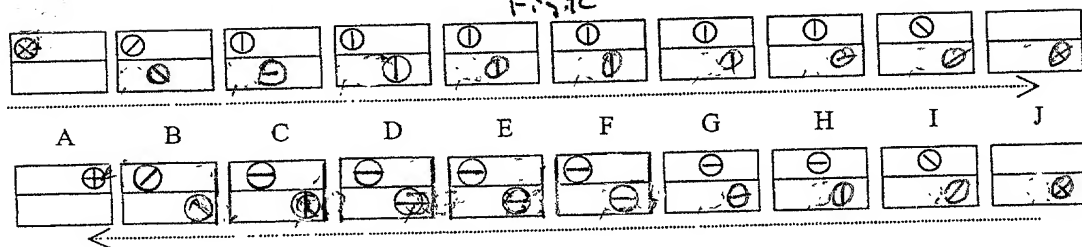
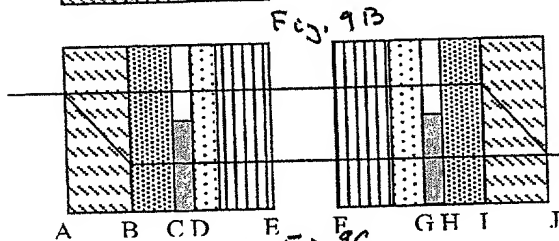
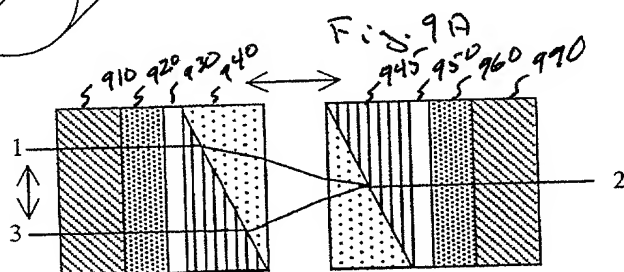
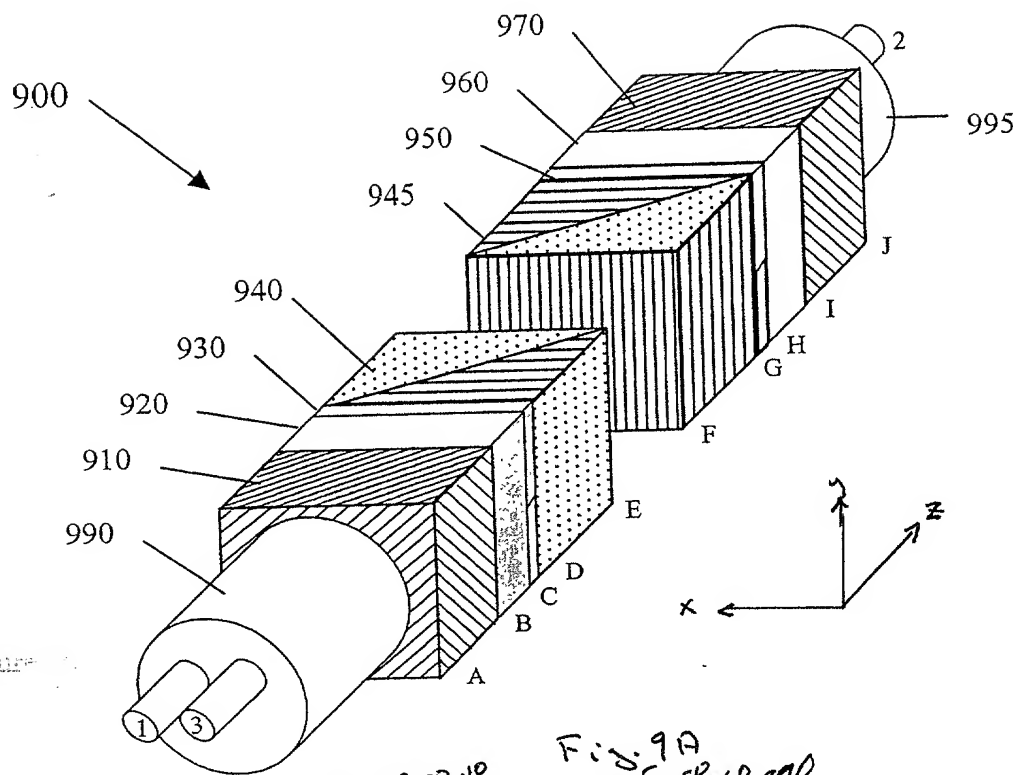


Figure 9D

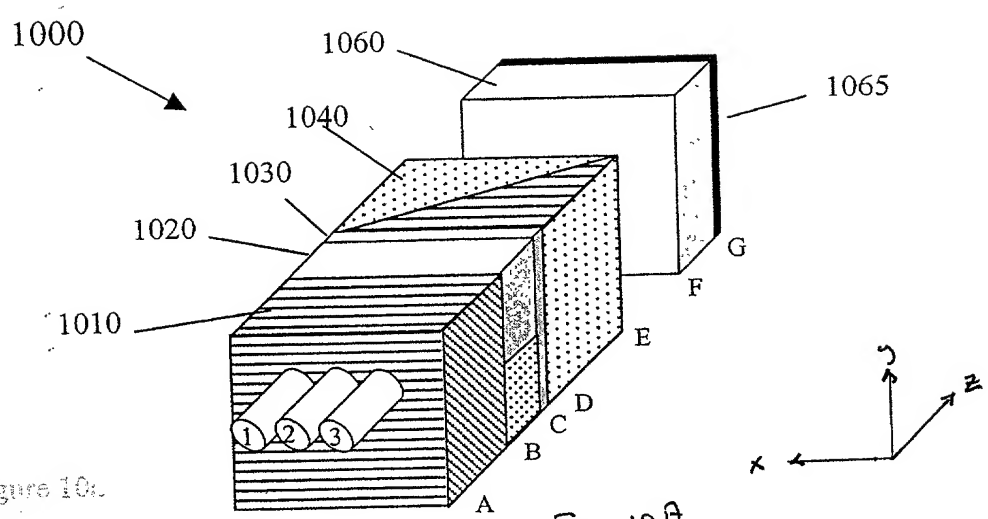


Figure 10A

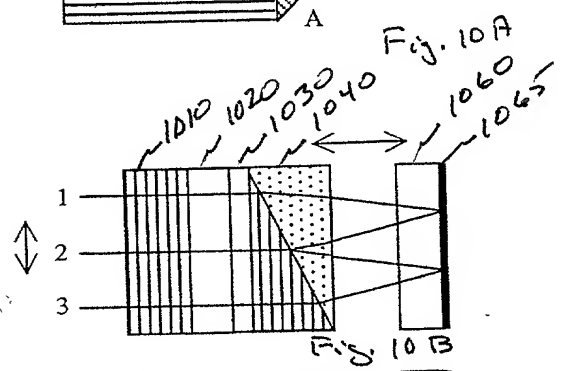


Figure 10B

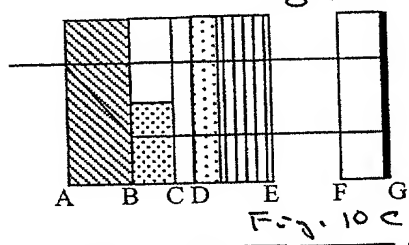


Figure 10C

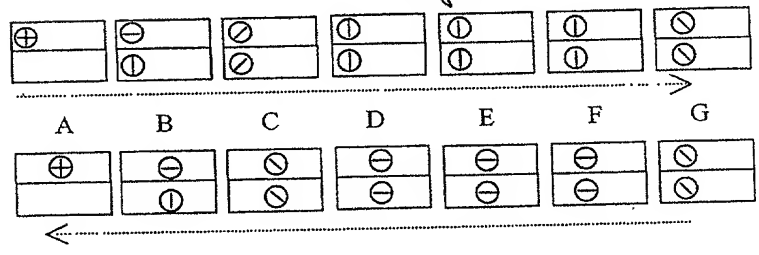


Fig. 10D

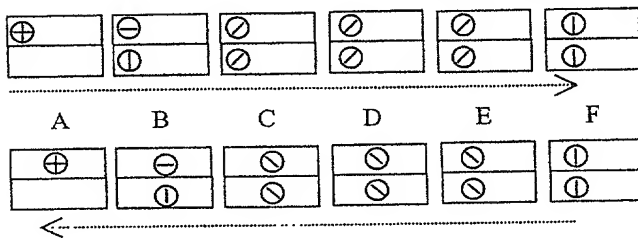
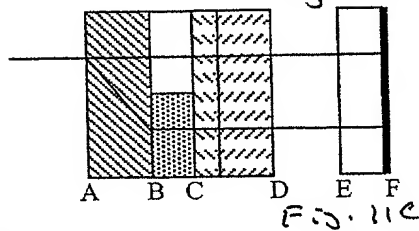
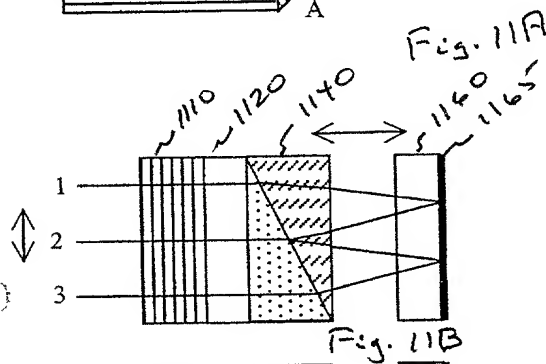
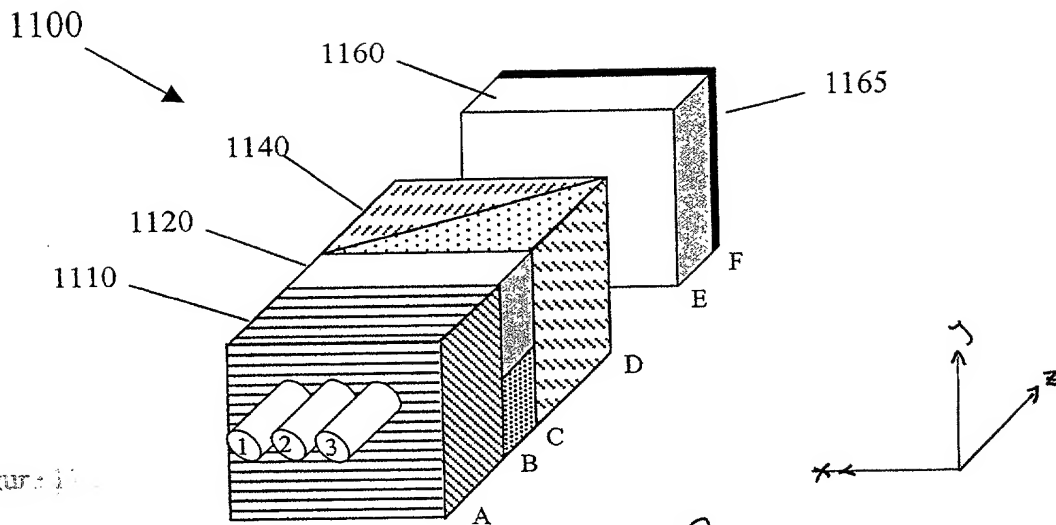


Fig. 11D

Fabrication Process of a Circulator Array

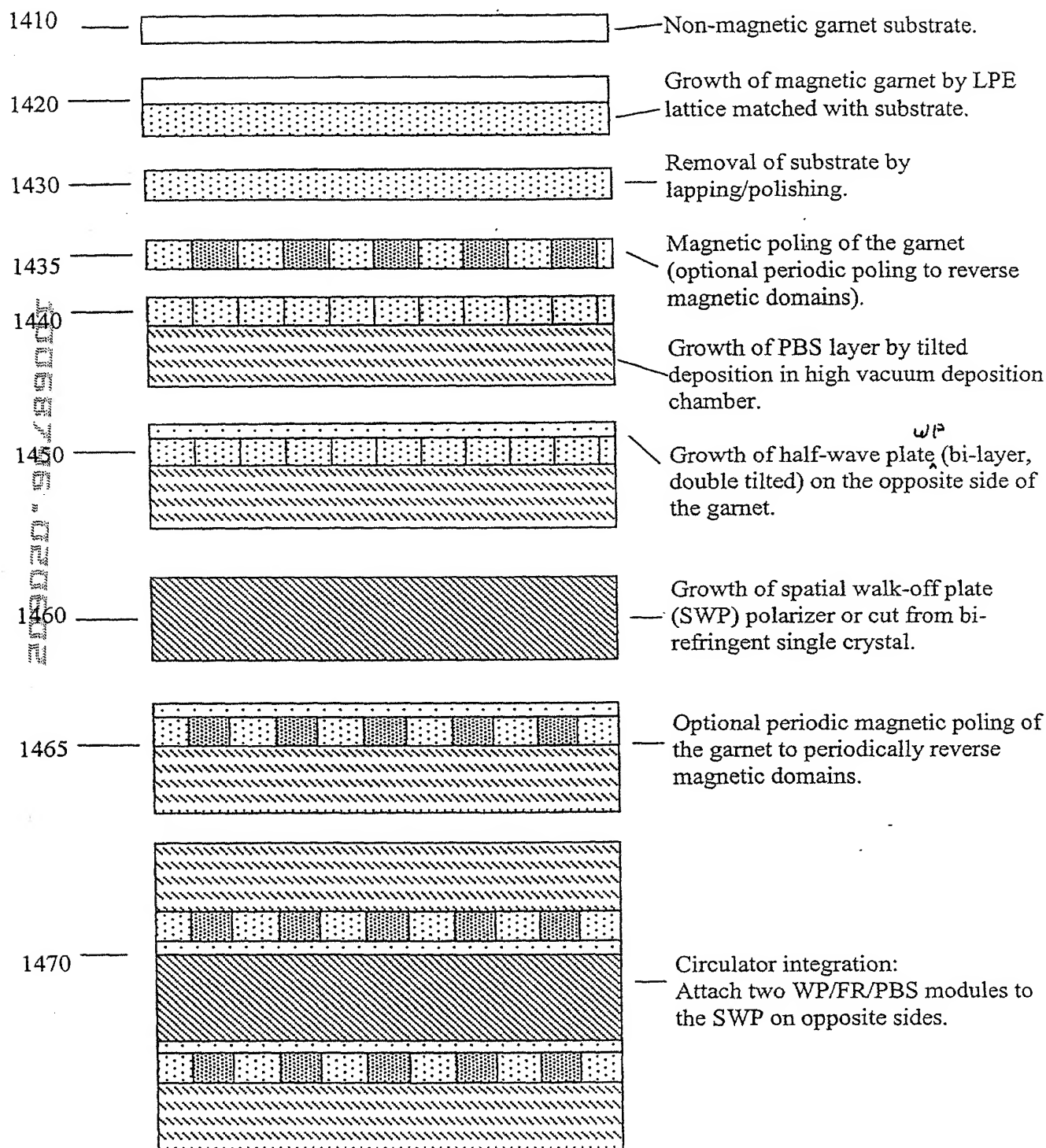
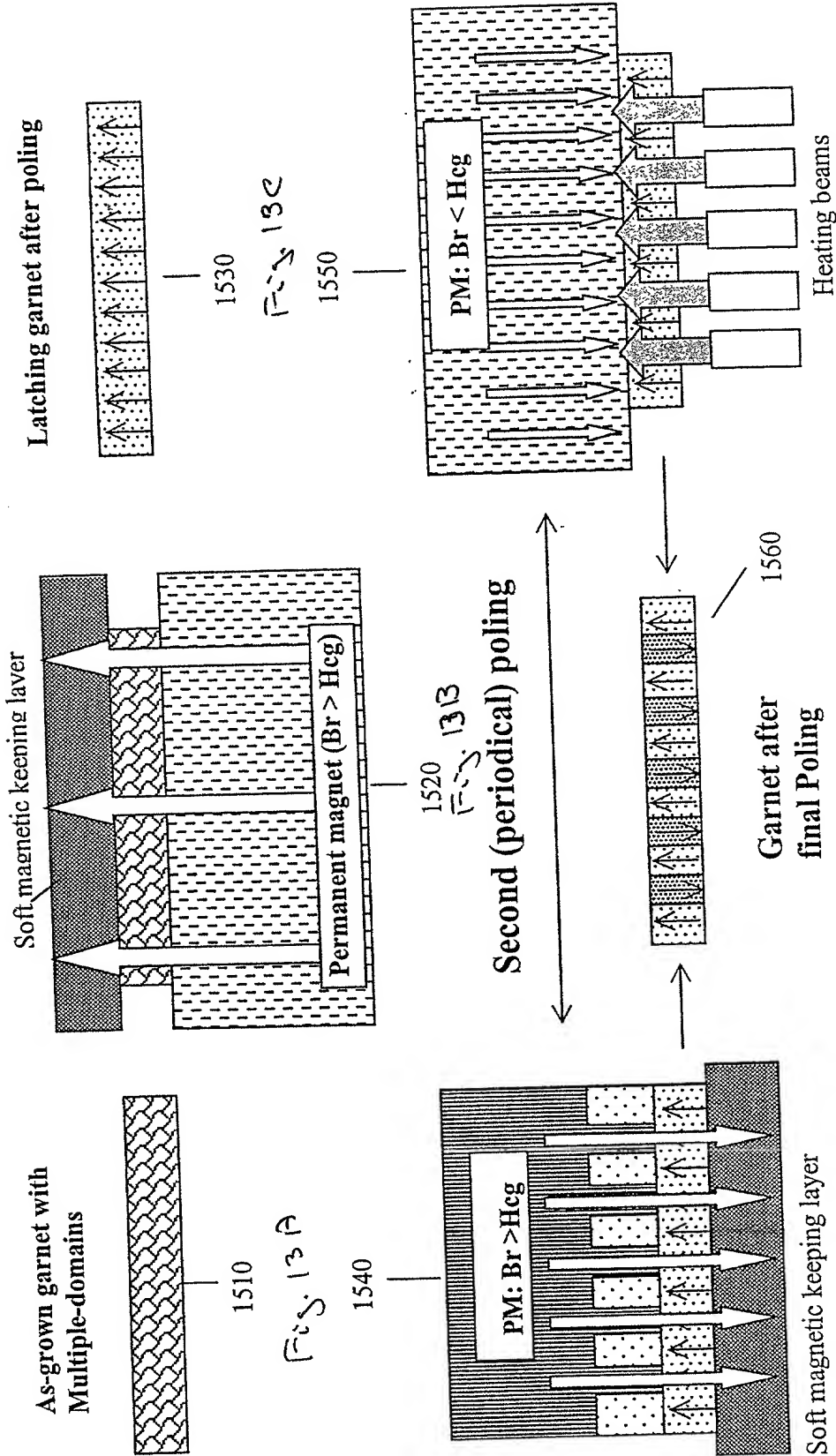


Fig. 12

Initial poling in high field



Hot poling: Only those domains illuminated by the heating beams are magnetically reversed.

Fig. 13E

Cold poling: Only those domains contacting the magnetic tips are magnetically reversed.

Fig. 13D

Magnetic (Periodic) Poling of Faraday Rotator

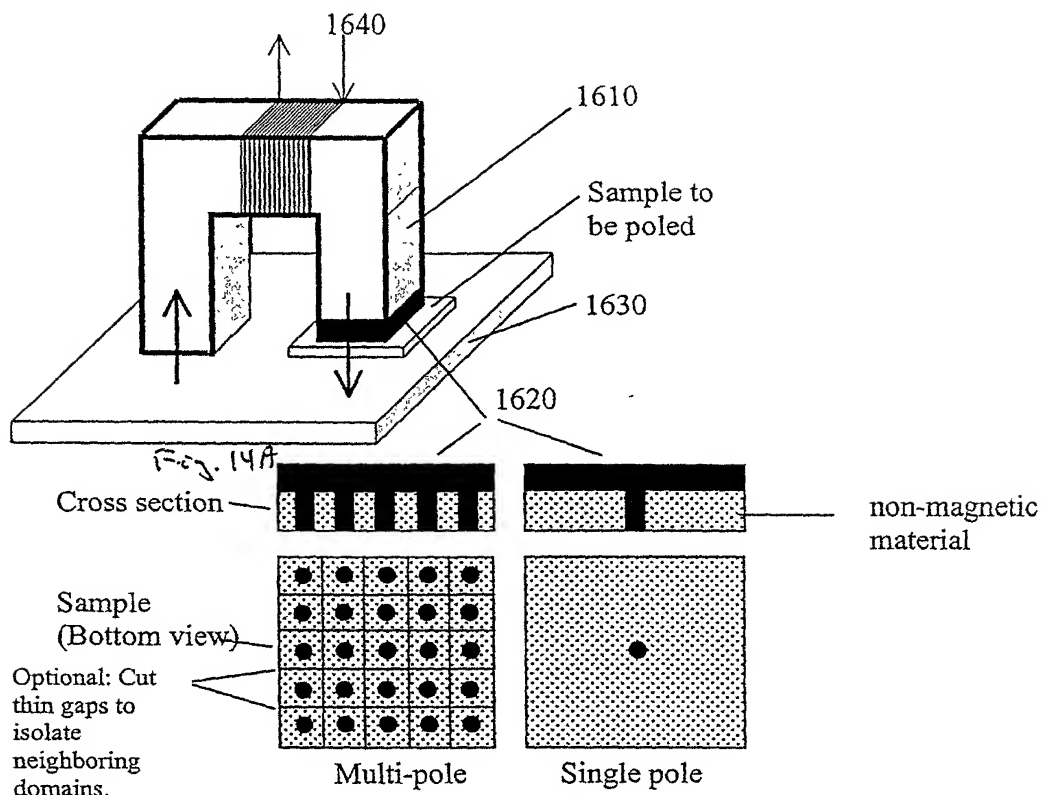
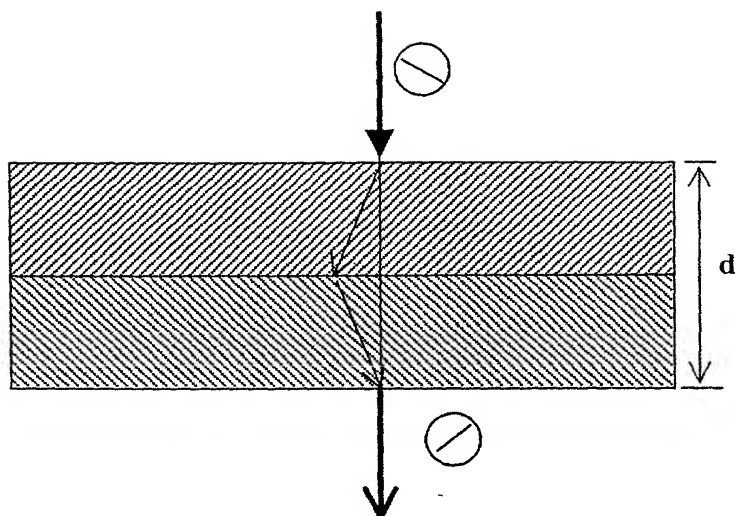


Fig. 14B

Fig. 14C

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Waveplate from bi-directionally obliquely deposited films

Half wave plate : $\Delta n \cdot d = \lambda/2$

The half-wave plate is capable of rotating a linearly polarized light by 2θ (where θ is the direction of polarization with respect to the optical axis before entering the wave plate).

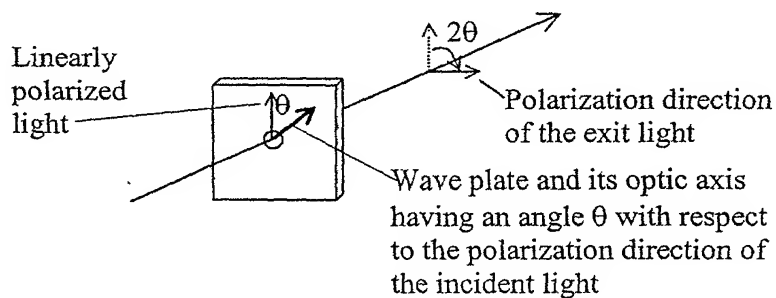
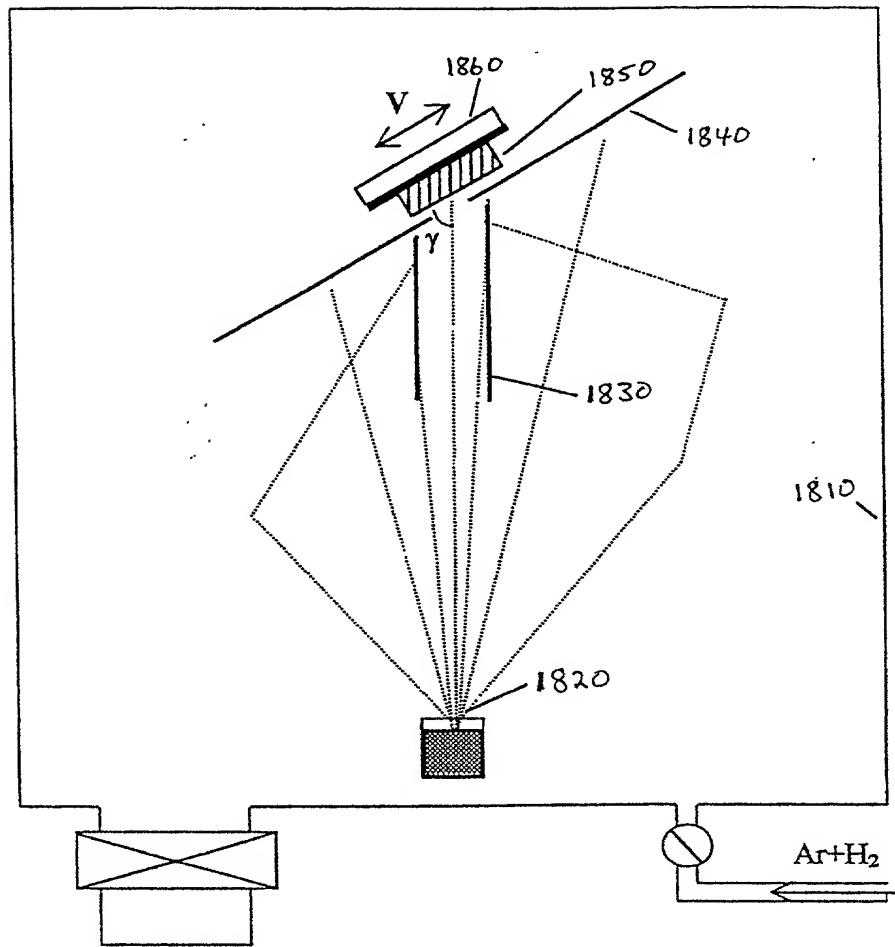


Fig. 15



1800

Fig. 16

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Fabrication Process of a Circulator Array

